

Air Env/Bell/Order

Cut Feb 23-26

Need -

Work Order ID 141543

141543

Friday, February 05, 2016 8:19:29 AM

Page 1

Short for orders

Item ID: D2680-041

Accept

N900040100

Setup

Start

NS1

Revision ID:

Stop

NS2

Item Name: Nut Plate

Start Date: 2/3/2016

Start Qty: 12.00

12

Required Date: 2/3/2016

Req'd Qty: 12.00

12

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan: MJS

Date: FEB 08 2016

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D2680

Rev B1

100

0.00

100

FLOW WATER JET

Waterjet

Memo

0.01

FLOW CNC Waterjet

1-Cut as per Dwg D2680 Dwg Rev: B1 Prog Rev: B1 2-
Deburr if necessary

02/16/02/24

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.00

Quality Control

02/16/02/24

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.00

Quality Control

(24)

DAS
38
9-89

FEB 25 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 141543

141543

Page 2

Friday, February 05, 2016 8:19:29 AM

Item ID: D2680-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Nut Plate
 Start Date: 2/3/2016 Start Qty: 12.00 ***12*** Cust Item ID:
 Required Date: 2/3/2016 Req'd Qty: 12.00 ***12*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
130	Small Fab					24X			16/02/25
Small Fab	Memo	0.01							
Small Fab	1- Deburr 2-C'sink as per Dwg D2680								
140		0.00							
140	QC5- Inspect part completeness to step on W/O	0.00				(24)			38 9-89
QC	Memo	0.00							
Quality Control									FEB 25 2016
150		0.00							
150	White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel	0.00				24	1602	29	33
Powdercoat	Memo	0.00							
Powder Coating	START TIME: 1:10. OVEN TEMPERATURE:								
	FINISH TIME: 1:40.								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐		Temperature/Cure ☐	Power Loss/Surge ☐		Positioned Wrong ☐																	
Design ☐	☐	Operator ☐	Bending ☐		Set-up ☐	Folio/Program ☐		Outside Dimensions ☐																	
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐		BOM/Route ☐	Grain ☐		Over/Under tolerance ☐																	
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐		Broken/Damage/Defect ☐	Weld ☐		Part Incorrect ☐																	
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐		Part Lost/Missing ☐																	
Material ☐	☐	Use for Testing ☐	Cuffs ☐		Contamination ☐	Out of Sequence ☐		Part Moved ☐																	
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐		Countersink ☐	Off-set ☐		Drawing ☐																	
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐		Cut Too Short ☐	Mislabeled ☐		Finish ☐																	
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐	Fit/Function ☐		Misread ☐																	
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐		Drill Holes ☐	Misaligned/off center ☐		Turning Sequence ☐																	
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : ☐																						
Misidentified ☐	☐	Past Due ☐																							

Work Order ID 141543

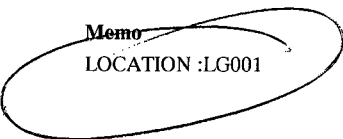
Friday, February 05, 2016 8:19:30 AM

141543

Page 4

Item ID: D2680-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Nut Plate
Start Date: 2/3/2016 Start Qty: 12.00 ***12*** Cust Item ID:
Required Date: 2/3/2016 Req'd Qty: 12.00 ***12*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	Identify as per dwg & Stock Location: _____	0.00							
190 Packaging Packaging	 Memo LOCATION :LG001	0.00				24	MLJ	16-03-01	
200	QC21- Final Inspection - Work Order Release	0.00							
200 QC Quality Control	Memo	0.02				MLJ		MAR 02 2016	

MLJ MAR 02 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing				
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____							
Misidentified ☐	☐ Past Due								

Picklist Print

Friday, February 05, 2016 8:19:34 AM

Page 1

Work Order ID: 141543

141543

Parent Item: D2680-041

D2680-041

Parent Item Name: Nut Plate

Start Date: 2/3/2016

Required Date: 2/3/2016

Start Qty: 12.00

Required Qty: 12.00

Comments:

IPP: D04.10.01Added Steps 2-4, 7-8KJ/JLM
IPP Rev:E Now on WaterJet 06-10-12 JLM
IPP rev F QCS after c'sink 07.07.05 EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

MS21069L4

Purchased

No

110

Each

41.0000

1

1224

16/03/01

DAS
36
9-89

MS21069L 4

Nut Plate

Location

Loc Qty

Loc Code

ST299

41

120498

2

m128636

11

m132123

3

m134167

25

3
21

M1010S16GA

Purchased

No

170

sf

109.4000

0.0131

0.165474

16/02/05

M1010S16GA

1010/1025 sheet 16GA

Location

Loc Qty

Loc Code

MAT019

109.4

124428

109.4

.5

MS20426AD3-3

Purchased

No

170

Each

4,460.000

2

24

16/03/01

DAS
36
9-89

MS20426AD3-3

RIVET

Location

Loc Qty

Loc Code

GA

1742

M131624

1742

ST312

2718

M131624

2718

48

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

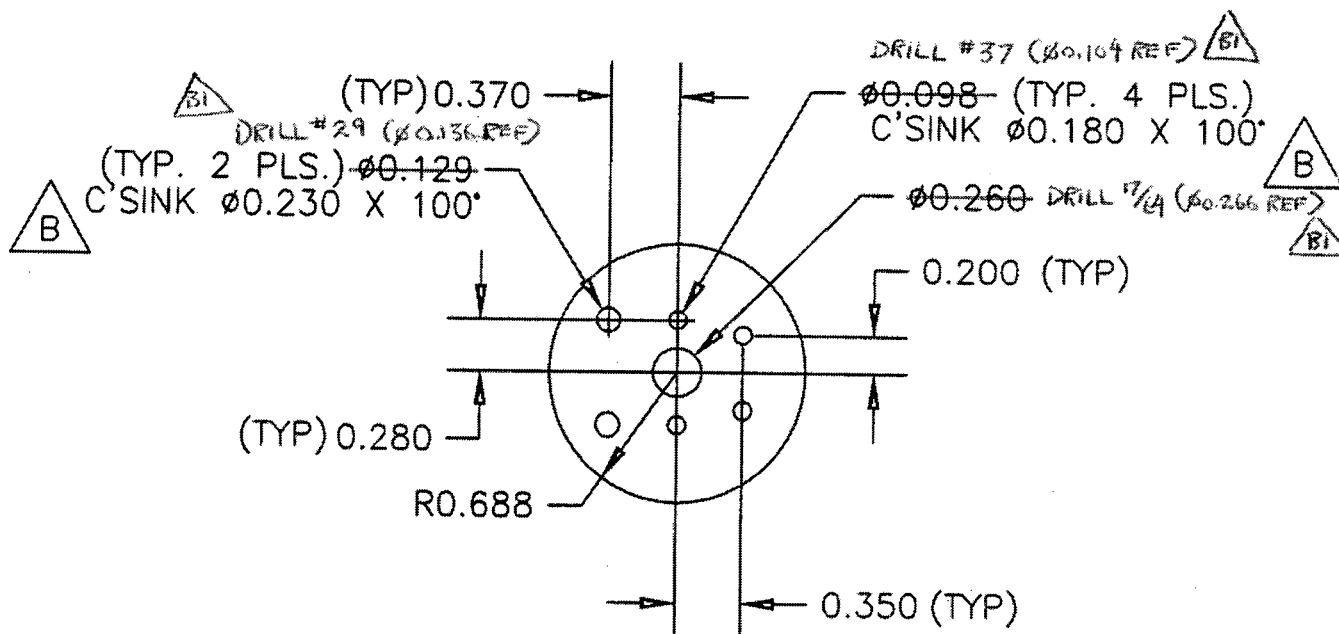
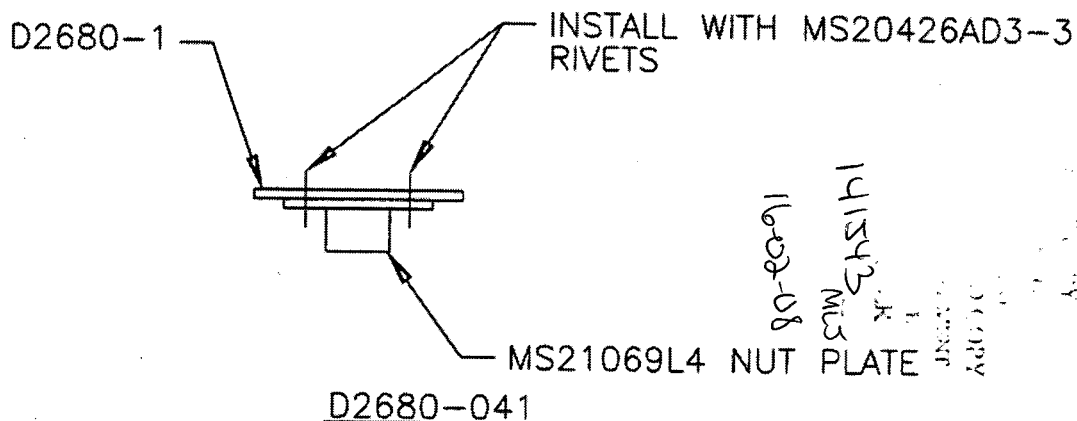
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							



DESIGN #	DRAWN BY #	DART AEROSPACE USA, INC. BELLEVUE, WA	
CHECKED P	APPROVED KE	DRAWING NO. D2680	REV. B SHEET 1 OF 1
DATE 98.12.14		TITLE NUT PLATE	SCALE 1:1
A	97.09.15	NEW ISSUE	
B	98.12.14	CHANGE C'SINKS (PER TSR A1041)	
BI	04.11.04	CHANGE HOLES & FINISH	

RELEASED
98.12.14 DS



MATERIAL: ASTM A36/A366/A569/A570 OR AISI 1010-1025 STEEL
0.063 THICK (16 GAUGE)

CAD PLATE PRIOR TO INSTALLATION OF MS21069L4

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

$\triangle$ BI POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3
D2680-1